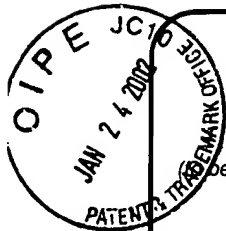


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Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**TRANSMITTAL  
FORM**

To be used for all correspondence after initial filing)

<b>TRANSMITTAL FORM</b> To be used for all correspondence after initial filing)	<b>Application Number</b>	09/977,069	
	<b>Filing Date</b>	October 11, 2001	
	<b>First Named Inventor</b>	Ramanath, G.	
	<b>Group Art Unit</b>	2811	
	<b>Examiner Name</b>		
<b>Total Number of Pages in This Submission</b>		<b>Attorney Docket Number</b>	020752-000121US

**ENCLOSURES (check all that apply)**

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☐ Amendment / Response
- ☐ After Final
- ☐ Affidavits/declaration(s)

☐ Extension of Time Request☐ Express Abandonment Request☐ Information Disclosure Statement☐ Certified Copy of Priority Document(s)☐ Response to Missing Parts/  
Incomplete Application☐ Response to Missing  
Parts under 37 CFR  
1.52 or 1.53

- ☐ Assignment Papers  
(for an Application)
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition Routing Slip (PTO/SB/69)  
and Accompanying Petition
- ☐ Petition to Convert to a  
Provisional Application
- ☐ Power of Attorney, Revocation  
Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s)

- ☐ After Allowance Communication to  
Group
- ☐ Appeal Communication to Board of  
Appeals and Interferences
- ☐ Appeal Communication to Group  
(Appeal Notice, Brief, Reply Brief)
- ☐ Proprietary Information
- ☐ Status Letter

☒ Other Enclosure(s)  
(please identify below):Request for Corrected Filing Receipt; red  
marked copy of filing receipt; Return  
Postcard; Supplemental ADS

Remarks

The Commissioner is authorized to charge any additional fees to  
Deposit Account 20-1430.**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

<b>Firm and Individual name</b>	Townsend and Townsend and Crew LLP Patrick R. Jewik	<b>Reg. No.</b> 40,456
<b>Signature</b>		
<b>Date</b>	12/27/01	

**CERTIFICATE OF MAILING**

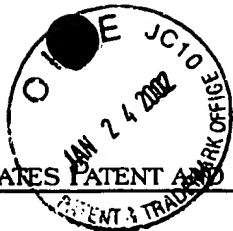
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date:

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<b>Typed or printed name</b>	Gigi Hoover	<b>Date</b>	12-27-01
<b>Signature</b>			

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SF 1303924 v1



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#5 Page 1 of 2

Receipt

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/977,069	10/11/2001	2811	740	020752- 000121US	3	5	1

CONFIRMATION NO. 9488

20350  
TOWNSEND AND TOWNSEND AND CREW  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

FILING RECEIPT



\*OC000000007083832\*

Date Mailed: 11/16/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

G. Ramanath, Troy, NY;

Ahila Krishnamoorthy, Madras, India;  
Kaushik Chanda, Poughkeepsie, NY;  
Shyam P. Murarka, Clifton Park, NY

Domestic Priority data as claimed by applicant

THIS APPLN CLAIMS BENEFIT OF 60/240,109 10/12/2000  
AND CLAIMS BENEFIT OF 60/244,160 10/27/2000  
AND CLAIMS BENEFIT OF 60/255,200 12/11/2000\*

(\* Data inconsistent with PTO records -

AND CLAIMS BENEFIT of 60/265,100 12/12/2000

Foreign Applications

If Required, Foreign Filing License Granted 11/15/2001

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Self-assembled near-zero-thickness molecular layers as diffusion barriers for Cu metallization

Preliminary Class

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**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

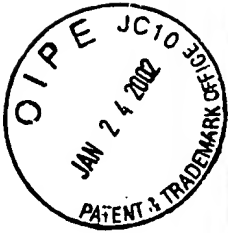
The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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Assistant Commissioner for Patents Washington, D.C. 20231  
on 12-27-01

PATENT  
Attorney Docket No.: 020752-000121US

By: Digi Hoover

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

G. Ramanath, et al.

Application No.: 09/977,069

Filed: October 11, 2001

For: SELF-ASSEMBLED NEAR-ZERO-THICKNESS MOLECULAR LAYERS AS DIFFUSION BARRIERS FOR CU METALLIZATION

Examiner: Unassigned

Art Unit: 2811

REQUEST FOR CORRECTED FILING  
RECEIPT

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Assistant Commissioner for Patents  
Office of Initial Patent Examination  
Customer Service Center  
Washington, D.C. 20231

Sir:

Attached is a copy of the official Filing Receipt received from the Patent and Trademark Office in the above-noted application for which issuance of a corrected filing receipt is respectfully requested.

There is an error in that the names of three inventors were omitted and should read as follows:

**Ahila Krishnamoorthy, Madras, India;**  
**Kaushik Chanda, Poughkeepsie, NY;**  
**Shyam P. Murarka, Clifton Park, NY**

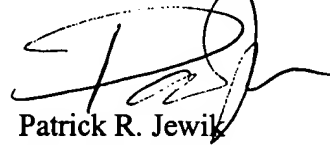
There is also an error in the Domestic Priority data in the second provisional application shown on the filing receipt and should read:

**AND CLAIMS BENEFIT OF 60/255,100 12/12/2000**

The requested corrections are shown in red on the enclosed copy of the official Filing Receipt.

Please charge any fees or credit overpayment to the Deposit Account No. 20-1430. This Petition is submitted in triplicate.

Respectfully submitted,



Patrick R. Jewik  
Reg. No. 40,456

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, 8th Floor  
San Francisco, California 94111-3834  
Tel: (415) 576-0200  
Fax: (415) 576-0300  
PRJ:gsh

SF 151138 v1\SF 1303906 v1

## **Supplemental Application Data Sheet**

### **Application Information**

Application number:: 09/977,069  
Filing Date:: 10/11/01  
Application Type:: Regular  
Subject Matter:: Utility  
Title:: SELF-ASSEMBLED NEAR-ZERO-THICKNESS  
MOLECULAR LAYERS AS DIFFUSION  
BARRIERS FOR CU METALLIZATION  
Attorney Docket Number:: 020752-000121US  
Request for Early Publication:: No  
Request for Non-Publication:: No  
Suggested Drawing Figure:: 1  
Total Drawing Sheets:: 3  
Small Entity?:: No  
Latin name::  
Variety denomination name::  
Petition included?:: No  
Petition Type::  
Secrecy Order in Parent Appl.: No

### **Applicant Information**

Applicant Authority Type:: Inventor  
Primary Citizenship Country:: India  
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Given Name:: G.  
Middle Name::  
Family Name:: Ramanath  
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Country of Residence:: US  
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City of Mailing Address:: Clifton Park  
State or Province of mailing address:: NY  
Country of mailing address:: US  
Postal or Zip Code of mailing address:: 12065

Applicant Authority Type:: Inventor  
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Status:: Full Capacity  
Given Name:: Ahila  
Middle Name::  
Family Name:: Krishnamoorthy  
Name Suffix::  
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State or Province of Residence::  
Country of Residence:: India  
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Postal Address Line Two:: Aerikkarai Street  
City of Mailing Address:: Virugambakkam, Madras  
State or Province of mailing address::  
Country of mailing address:: India  
Postal or Zip Code of mailing address:: 600 092

Applicant Authority Type:: Inventor  
Primary Citizenship Country:: India  
Status:: Full Capacity  
Given Name:: Kaushik

Middle Name::  
Family Name:: Chanda  
Name Suffix::  
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State or Province of Residence:: NY  
Country of Residence:: US  
Street of Mailing Address:: 134 Innis Ave. Apt. D-9  
City of Mailing Address:: Poughkeepsie  
State or Province of mailing address:: NY  
Country of mailing address:: US  
Postal or Zip Code of mailing address:: 12601

Applicant Authority Type:: Inventor  
Primary Citizenship Country:: US  
Status:: Full Capacity  
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Family Name:: Murarka  
Name Suffix::  
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State or Province of Residence:: NY  
Country of Residence:: US  
Street of Mailing Address:: 7 Shadowbrook Drive  
City of Mailing Address:: Clifton Park  
State or Province of mailing address:: NY  
Country of mailing address:: US  
Postal or Zip Code of mailing address:: 12065



### **Correspondence Information**

Correspondence Customer Number:: 20350

### **Domestic Priority Information**

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application	Non-Provisional of	60/240,109	10/12/00
09/977,069	Non-Provisional of	60/244,160	10/27/00
09/977,069	Non-Provisional of	60/255,2100	12/12/00



## UNITED STATES PATENT AND TRADEMARK OFFICE

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 WASHINGTON, D.C. 20231  
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Bib Data Sheet

CONFIRMATION NO. 9488

<b>SERIAL NUMBER</b> 09/977,069	<b>FILING DATE</b> 10/11/2001 <b>RULE</b>	<b>CLASS</b> 257	<b>GROUP ART UNIT</b> 2811 2813	<b>ATTORNEY DOCKET NO.</b> 020752-000121US
<b>APPLICANTS</b> G. Ramanath, Clifton Park, NY; Ahila Krishnamoorthy, Madras, INDIA; Kaushik Chanda, Poughkeepsie, NY; Shyam P. Murarka, Clifton Park, NY;				
<b>** CONTINUING DATA *****</b> <i>EK</i> THIS APPLN CLAIMS BENEFIT OF 60/240,109 10/12/2000 AND CLAIMS BENEFIT OF 60/244,160 10/27/2000 AND CLAIMS BENEFIT OF 60/255,100 12/12/2000				
<b>** FOREIGN APPLICATIONS *****</b>				
<b>IF REQUIRED, FOREIGN FILING LICENSE GRANTED</b> <b>** 11/15/2001</b>				
Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance		<b>STATE OR COUNTRY</b> NY	<b>SHEETS DRAWING</b> 3	<b>TOTAL CLAIMS</b> 5
Verified and Acknowledged Examiner's Signature _____ Initials _____		<b>INDEPENDENT CLAIMS</b> 1		
<b>ADDRESS</b> 20350				
<b>TITLE</b> Self-assembled near-zero-thickness molecular layers as diffusion barriers for Cu metallization				
<b>FILING FEE RECEIVED</b> 870	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit	